Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Request for Comments on FCC Report	)	GN Docket No. 09-29
On Rural Broadband Strategy	)	

COMMENTS OF THE NATIONAL CABLE & TELECOMMUNICATIONS ASSOCIATION

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The National Cable & Telecommunications Association ("NCTA") hereby responds to the Commission's request for comment on the development of a comprehensive rural broadband strategy pursuant to the Food, Conservation, and Energy Act of 2008 ("2008 Farm Bill").[1/] NCTA is the principal trade association of the cable industry in the United States. NCTA represents cable operators serving more than 90 percent of the nation's cable television households and more than 200 cable program networks, as well as equipment suppliers and providers of other services to the cable industry. The cable industry is the nation's largest provider of residential high-speed Internet service after investing more than $145 billion since 1996 to build a two-way, interactive network with fiber optic technology, and has a keen interest in the Commission's development of broadband strategy.

[1/] Pub. L. No. 110-246, 122 Stat. 1651 (Jun. 18, 2008); *see* Public Notice "Comment Date Established For Report on Rural Broadband Strategy," GN 09-29 (rel. Mar. 10, 2009) ("Public Notice").

INTRODUCTION AND SUMMARY

NCTA commends the Commission for seeking public input on this report, which will undoubtedly have implications well beyond the role outlined in the 2008 Farm Bill. In particular, since tasking the Commission in 2008 with formulating a rural broadband strategy, Congress has enacted the American Recovery and Reinvestment Act of 2009 ("ARRA"), which requires the Commission to develop a comprehensive national broadband plan. The rural broadband strategy developed in this docket will now be part of that larger nationwide effort. As the Commission notes, Congress's decision to twice direct the Commission to develop a broadband strategy shows the increased importance of broadband to the nation's economy and future, and places a "renewed focus on the importance of interagency and intergovernmental coordination."[2/]

NCTA believes that a successful strategy to increase rural broadband deployment and adoption requires a three-pronged approach. First, interagency coordination and communication is essential to ensuring that the various rural broadband support programs are administered efficiently and consistently. Second, the agencies responsible for awarding grants, loans, or other funds under any of the broadband incentive programs must ensure complete transparency in the application and award process in order to inspire public confidence in the programs and ensure that funds are put to their best use.

Finally, the agencies must agree on and institute clearly defined goals. Those goals should focus first on extending broadband facilities to areas without any broadband service; second, on supporting programs that enable underserved populations to purchase and make effective use of broadband service where it is already available; and third, if funds remain, on

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2/ Public Notice at 1.

enhancing broadband facilities in underserved areas, defined as areas without today's current generation broadband services. A strategy that embodies these steps – for rural broadband programs and as part of the national broadband strategy – will best promote the goals of improved broadband accessibility and adoption in rural areas and throughout the country.

There are other important steps the Commission can and should take to increase rural broadband accessibility. It can revise the mechanism for distributing high-cost universal service support by reducing the support provided to those areas where the market is working to make competitive service available and reallocating those resources more efficiently. And it can adopt a pole attachment rate formula applicable to all broadband providers that promotes broadband deployment in rural areas by ensuring that pole attachment fees are no higher than needed to cover the costs incurred by the pole owner.

I. COMPLETE INTERAGENCY COMMUNICATION AND COORDINATION IS CRITICAL TO THE DEVELOPMENT OF A SUCCESSFUL RURAL BROADBAND STRATEGY

Congress has rightly identified increasing broadband deployment as an important part of the recovery strategy for the Nation. Studies show that communities where broadband is available "experience[] more rapid growth in employment, the number of businesses overall, and businesses in IT-intensive sectors," that "the effects of broadband availability . . . can also be observed in higher property values," and that broadband "is clearly related to economic well-being and is thus a critical component of [the] national communications infrastructure."[3/]

Cable has long been in the forefront of the growth and deployment of broadband service.

[3/] Sharon E. Gillett, Dr. William H. Lehr, Carlos A. Osorio, Massachusetts Institute of Technology and Professor Marvin A. Sirbu, Carnegie Mellon University, *Measuring Broadband's Economic Impact, Final Report Prepared for the U.S. Department of Commerce, Economic Development Administration*, at 3 (Feb. 2006).

Since 1996, the cable industry has invested over $145 billion to upgrade and expand its networks to provide broadband access. The result of this investment is that cable operators today offer broadband to 92 percent of U.S. households. And cable is not sitting still: it is estimated that cable will spend another $14 billion continuing such upgrades and expansion this year. In the last year, the cable industry began deploying next-generation "wideband" service throughout the United States, offering speeds of 50 to 60 megabits per second, with the potential to one day reach speeds well in excess of 100 megabits per second. Moreover, a number of cable companies already have begun deploying various technologies to supply wireless broadband service. Spurred by cable's investment, telephone companies and wireless providers have also deployed broadband networks, creating a vibrant, competitive marketplace characterized by explosive growth in both broadband deployment and adoption.

Despite this progress, there is clearly still a small percentage of the nation's homes – primarily in sparsely populated rural areas – with *no* physical access to broadband. Even in areas where one or more providers offer broadband service, there can be other barriers to adoption – such as affordability, the lack of a computer or other equipment needed to connect to the Internet, and low levels of basic "digital literacy."

Addressing these issues falls within the jurisdiction of a variety of agencies by virtue of a number of programs (*i.e.*, the 2008 Farm Bill, the RUS and BTOP programs in the ARRA, the RUS distance learning and telemedicine program), and coordination and communication among the responsible agencies will be essential to the success of these efforts. They must share ideas and devise common approaches so that they are functioning harmoniously in furtherance of a unified common plan. In adopting the broadband deployment provisions of both the ARRA and

the 2008 Farm Bill, Congress indicated a preference for coordination,[4/] and in amending the provisions of the RUS broadband grant and loan program as a part of the 2008 Farm Act, the House recognized that "[w]ithout a strategy to guide the policy implemented by the Federal government to bridge the divide in telecommunications access in rural areas, the Committee fears that a piecemeal approach will arise that does not solve the problem."[5/]

The FCC should incorporate these fundamental principles into its report. Without a coordinated interagency effort, if each of these programs is run according to different standards, using different approaches and striving to meet different priorities, there can be little hope of meaningful improvement to broadband access in rural areas. The scattered and unconnected pockets of improved access in random communities likely to result in the absence of coordination would do nothing to further the overall goal of using broadband as a tool of enhancing economic performance.

A. Agencies Charged With Promoting Rural Broadband Should Establish A Common Understanding Of Those Priority Areas Most In Need Of Assistance.

A critical aspect of interagency coordination is establishing a common understanding of which areas of the country are in the greatest need of receiving benefits under the various programs. While each area may not be eligible under each program, a coordinated plan among the agencies can ensure that benefits are distributed in an efficient manner that brings help to all priority areas without waste or duplication.

As a starting point, each agency charged with implementing rural broadband programs should identify officials with primary responsibility for rural areas. Those officials should meet

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4/ H. CONF. REP. NO. 111–16, at 776 (2009); H.R. REP. NO. 110-256, at 232 (2008).

5/ H.R. REP. NO. 110-256, at 232 (2008).

regularly to ensure a common understanding of which areas most need broadband access and a commitment to distributing support in a manner that prioritizes those areas. As discussed in detail below, NCTA believes that the agencies' focus should be on improving broadband access in unserved areas and promoting broadband adoption by underserved populations. Whatever priorities are established, however, the agencies must work together to identify those areas that should receive priority benefits; clarify which areas and providers have received funding under all the existing programs; and determine if there is a disconnect between the priority areas most in need of assistance and the areas in which benefits have been distributed. The failure to follow such an approach in the past has resulted in the ineffective and inefficient use of taxpayer funds.

A critical part of this approach will be a commitment to rely on the map of broadband availability that results from the mapping initiative established by the Broadband Data Improvement Act[6/] and funded by the ARRA. Once complete, the map should be a tool that is used across all relevant agencies, so that they are consistently working from a uniform, up-to-date understanding of where broadband is available. In addition, and while the mapping initiative is being completed, the agencies can look to the Commission's data on broadband deployment, which companies now provide on a census tract-level basis, as a tool to help assess the availability of broadband in particular areas.

An important benefit of coordinating priority areas with funding is that it would also avoid the problem of wasted resources due to overlapping funding. In fact, coordination is essential for certain agencies because the ARRA provision funding the RUS loan and grant program expressly states that "no area of a project funded with amounts made available under [the RUS] may receive funding to provide broadband service under the Broadband Technology

6/ Broadband Data Services Improvement Act, Pub. L. No. 110-385, 122 Stat. 4095 (2008).

Opportunities Program."[7/] While different agencies may be charged with granting or distributing different funds or loans to increase rural broadband deployment and adoption, to the extent agencies are permitted to overlap funding, it is imperative that those agencies avoid concentrating too many funds in one area at the expense of others. For example, House Energy and Commerce Committee Chairman Henry Waxman recently expressed concern that three companies in Hawaii have been receiving subsidies worth almost $13,000 a line to serve the same insular area, resulting in more than $120 million in three years being devoted to support in this relatively small area.[8/] Coordinating benefit disbursement would ensure that benefits are distributed fairly across a variety of priority areas in a manner that spreads the reach of broadband rather than creates isolated pockets with broadband service.

B. All Rural Broadband Support Programs Must Use The Same Standards And Criteria.

To maximize the results obtained under rural broadband support programs, agencies must do more than coordinate their distribution of benefits; they must also harmonize the programs under which benefits are distributed so that all rural broadband support programs use the same standards and criteria.

In particular, the critical terms that will guide the distribution of benefits under the programs, such as "broadband," "unserved," "underserved," "rural" and others, must be defined consistently across the programs. Other important aspects of the programs, such as the rules for

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[7/] ARRA, Pub. L. No. 111-5, Div. A, Title I; *see also id.*, § 6001(h) (requiring the Assistant Secretary of Commerce for Communications and Information to consider whether, if approved, a grant would "result in unjust enrichment as a result of support for non-recurring costs through another Federal program for service in the area.").

[8/] *Universal Service: Reforming the High-Cost Fund*: *Hearing Before the Subcomm. on Communications, Technology, and the Internet of the H. Comm. on Energy and Commerce*, 111th Cong. (March 12, 2009) (Opening Statement of Rep. Henry A. Waxman, Chairman, Committee on Energy and Commerce).

eligibility, standards for floors or ceilings on grant amounts, limits on the amount of funding certain carriers can receive, obligations that should attach to recipients of funds, and other important criteria, should be harmonized to the greatest extent possible to avoid advantaging any particular provider or technology, to prevent unjust enrichment of recipients, and generally to ensure that the funds are put to the best and highest use. The Commission has a significant role to play in establishing these definitions; in the ARRA, Congress explicitly directed NTIA to coordinate with the Commission concerning the definitions of applicable terms so that "the NTIA may benefit from the FCC's considerable expertise in these matters."[9/]

The programs must also be harmonized in terms of their application requirements, which should be made as simple and straightforward as possible while ensuring that the agencies have the information they need. Indeed, Congress has criticized the RUS broadband grant and loan program in the past because of "the complexity of the loan application process," and in the 2008 Farm Act included "language to ensure that paperwork is reduced for the loans and that the Secretary has sufficient authority to continue to find ways to reduce red tape, particularly for applicants who are start-up companies or who are entering completely unserved areas."[10/]

II. ALL RURAL GRANT AND LOAN PROGRAMS MUST BE ADMINISTERED WITH TRANSPARENCY

Inspiring renewed public confidence in subsidy programs by running them in an open and transparent manner is critical to their success. Under existing programs, very limited public disclosure is required of rural loan applicants. RUS, for example, does not typically disclose all of the communities a loan or grant applicant proposes to serve, or the assertions made by the

9/ H. CONF. REP. NO. 111-16, at 776 (2009).

10/ H.R. REP. NO. 110-256, at 232 (2008).

applicant about existing broadband service in a community.[11/] As a result, there has been no effective means by which broadband providers already serving a geographic area can be made aware that another provider is seeking or has been granted funds to serve the same area, nor can they evaluate or dispute an applicant's claims that an existing provider is serving customers poorly, offering service at insufficient data rates, or is otherwise deficient. This lack of information has meant that agencies granting the loans might not have had complete information about the level of broadband already serving an area, information that directly affects their ability to analyze properly whether repayment of a particular loan is feasible.

Partially as a result of these problems, existing programs designed to promote rural broadband have sometimes failed to achieve their objectives. A September 2005 U.S. Department of Agriculture Inspector General's Audit Report on the broadband loan program established by the RUS pursuant to the Farm Security and Rural Investment Act of 2002 found that the program had "not maintained its focus on rural communities without preexisting service" and was instead being used to subsidize competition in suburban areas and in communities already served by one or more existing broadband providers.[12/] Instead of rewarding private entrepreneurs for being the first risk takers in rural America, the program penalized these providers by forcing them to face a government-subsidized competitor. A repeat of these problems must be avoided, so that the public sees meaningful results from the devotion of these substantial funds to broadband, and does not lose further confidence in these programs.

To ensure that funding is properly dedicated to unserved areas – or, if benefits are not

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11/ While the 2008 Farm Bill included additional disclosure requirements for the existing RUS broadband loan program, the revised regulations governing that program have yet to be released.

12/ AUDIT REPORT 09601-4-TE, RURAL UTILITIES SERVICE BROADBAND GRANT AND LOAN PROGRAMS, U.S. DEPARTMENT OF AGRICULTURE, OFFICE OF INSPECTOR GENERAL, SOUTHWEST REGION, at ii (Sept. 2005).

limited to unserved areas, to ensure that the agency has the best and most complete information possible before determining whether to make an award in an already-served area – it is important that the entire award process be transparent to the public. A more transparent, open process allowing for disclosure of non-proprietary, non-confidential information to the public would assist both the agencies evaluating loans and grants, and the public, whose tax money supports the programs.

First, applicants should be required to be as transparent as possible in their applications, and must provide detailed information demonstrating that the project will bring broadband to an area that does not have access or has insufficient access to high speed broadband. The application should include such details as:

- A description of the applicant's proposed project area, including a project area map, whether and to what extent that project area is believed to be served based on the data collected by the FCC on its Form 477, and once the national broadband map is finalized and available, whether and to what extent that project area is described as already served on the national broadband map;

- Information on the number of potential customers in the proposed project area;

- A geographical representation and numerical estimate of the unserved households within the proposed project area that the applicant believes will be served upon completion of the project;

- The number and identity of existing providers of broadband service, if any, in the proposed project area; and

- Details regarding planned network construction, including types of equipment that will be deployed, and a showing that network performance will meet or exceed the speed eligibility requirements.

Applicants should also be required to identify all sources of funding for the project. For example, the ARRA requires applicants for BTOP funds to "disclose . . . the source and amount of other Federal or State funding sources from which the applicant receives, or has applied for,

funding for activities or projects to which the application relates."[13/] To avoid unjust enrichment, all agencies implementing broadband grant or loan programs should adopt similar requirements and require applicants for such funding to disclose all other sources of government funding that would be used to support construction or operation of the facilities, including funding from federal and state universal service mechanisms.

Second, each agency distributing rural broadband funds should be required to make public all information about the applications it receives. The agency should identify each applicant and the areas the applicant proposes to serve, as well as the evidence that has been offered regarding the geographical availability of broadband in a project area.

This greater transparency need not come at the expense of revealing applicants' confidential business information. Most of this information is publicly available and not company-specific. The value to this approach comes not from learning a company's proprietary business plans, but rather from forcing all applicants to make public the statements upon which their applications will be judged, such as facts offered about other providers' service areas and capabilities, rather than allowing applicants to make such representations unchallenged behind closed doors.

In furtherance of this goal, the public should be given a reasonable period of time to provide additional information regarding broadband availability in the proposed project area. Soliciting information from the public will ensure that the agency has complete information before determining whether to grant an application and will allow the agency to independently verify an applicant's claims of whether the area proposed to be served is currently "rural," "unserved," or "underserved," the geographical eligibility requirements Congress has established

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13/ ARRA, § 6001(e)(6).

for funding. This will better enable the agencies to direct loans to communities most in need of assistance, so that each distribution of benefits furthers the goals of the program.

Finally, to ensure transparency and public accountability *after* grants and loans have been awarded, at a minimum, recipients should be required to file quarterly reports. The ARRA requires that all recipients of BTOP grants to "report quarterly . . . on such entity's use of the assistance and progress fulfilling the objectives for which such funds were granted, and the Assistant Secretary shall make these reports available to the public."[14/] Quarterly reports should be a requirement of *all* federal broadband grant and loan programs. These reports should contain information that allows the public to assess whether taxpayer funds are being used wisely, such as the recipient's completed and planned spending of funds and construction activities; the number and percentage of potential customers currently being offered broadband service in the project area, and of customers currently taking broadband service in the project area; and the number of jobs created through the project. These reports, too, should be posted on agency websites so that the public can monitor how public funds are being used.

III. A SUCCESSFUL RURAL BROADBAND STRATEGY MUST BE BASED ON COHERENT AND CLEARLY DEFINED GOALS

A comprehensive rural broadband strategy should marshal new and existing support programs in a coherent and complementary manner that most effectively brings broadband services to rural areas and populations that currently lack these critical services. The agencies involved must articulate clear and consistent goals for the programs, set benchmarks for achieving those goals, and set standards for the programs that are designed to achieve these common goals.

14/ ARRA, § 6001(i)(1).

To best ensure that broadband fulfills its promise to rural America as an engine of job creation, a facilitator of educational and health care opportunities, and a means of shrinking the distances between isolated communities, a rural broadband strategy should focus on a few critical priorities: improving broadband deployment in rural unserved areas and enhancing rural broadband adoption by underserved populations; ensuring that support is technology-neutral so that consumers have a choice of providers and technologies in all areas of the country; and ensuring that all programs use a definition of "broadband" that promotes the deployment of facilities in unserved rural areas rather than deterring investments by establishing unrealistic requirements.[15/]

A. Rural Broadband Strategy Should Focus On Improving Broadband Deployment In Unserved Rural Areas And Broadband Adoption By Underserved Rural Populations.

Even when program eligibility extends beyond areas with no broadband service, the primary goal for agencies awarding grants and loans for rural broadband support must be to extend broadband facilities to rural unserved areas. Of the approximately 9-10 million households that lack access to broadband service, a high percentage are located in rural communities.[16/] A 2008 Pew Internet Project survey found that 60 percent of suburban areas have broadband at home, compared with 38 percent for rural areas.[17/] Moreover, these are frequently the very areas of the country that could most use the economic jump-start that

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[15/] NCTA's proposed broadband framework is set out in additional detail in the white paper entitled *Moving the Needle on Broadband: Stimulus Strategies to Spur Adoption and Extend Access Across America*, attached hereto as Attachment A.

[16/] Jon M. Peha, *Bringing Broadband to Unserved Communities*, The Hamilton Project (The Brookings Institution) (July 2008), at 11 *available at* http://www.brookings.edu/~/media/Files/rc/papers/2008/07_broadband_peha/07_broadband_peha.pdf.

[17/] *See* Anne Veigle, *Rural Broadband Programs Helping Fewer Customers*, COMMUNICATIONS DAILY (Sept. 8, 2008).

widespread broadband access can deliver, because rural communities tend to be among the areas with the lowest income levels in the country.[18/] As a result, prioritizing unserved areas as part of the nation's rural broadband policy has widespread support in Congress.

Recently, a bipartisan group of 10 Senators urged such an approach in a letter to Secretary of Agriculture Tom Vilsack, acting FCC Chairman Michael J. Copps, and acting Secretary of Commerce Otto Wolf, explaining that "high-speed broadband is a crucial driver of economic recovery, creating jobs and enhancing our global competitiveness" and that by "providing access to high-speed broadband to places that only have access to dial-up connections, many rural communities will experience the development that broadband allows. Broadband access will spur job creation in rural areas hardest hit by the recession. Broadband will also be central to improving educational opportunities and delivering health care more efficiently, important benefits that also contribute to economic growth."[19/] As these Senators and others recognize, prioritizing these areas for support is the only way to remedy the disparities between those communities with broadband access and those where a market solution has not emerged.

Prioritizing unserved areas for government support also avoids creating disincentives for providers to continue deploying broadband through private investment. A robust broadband

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[18/] *See, e.g.*, Kathleen Miller and Bill Bishop, *Rural Personal Income Falls Behind the Cities*, DailyYonder.com (May 11, 2008) *available at* http://www.dailyyonder.com/rural-personal-income-falls-behind-cities (reporting that the latest Bureau of Economic Analysis data showed that "[m]ost rural counties were well below national averages both in absolute personal income and in increases from '05 to '06. Nationally, the average personal income increased 6.7 percent from '05 to 2006. Only 362 out of 2029 rural counties (18 percent) reported income increases equal to or higher than this national average.); *see also* David G. Lenze, LOCAL AREA PERSONAL INCOME FOR 2006, BUREAU OF ECONOMIC ANALYSIS, U.S. DEPT. OF COMMERCE (May 2008) *available at* http://www.bea.gov/scb/pdf/2008/05%20May/0508_lapi.pdf (in 2006, personal income declined in 223 nonmetropolitan counties and that the "vast majority of the counties where personal income declined are small, with fewer than 5,000 jobs, less than 10,000 residents, and personal income of less than $250 million").

[19/] *See Senators Urge Unserved Priority For ARRA Broadband Funds*, TR DAILY (Mar. 11, 2009).

strategy inevitably depends on this continued private investment – government subsidies cannot fund all the broadband deployment needed for the country to become truly broadband-accessible. Companies that have taken the financial risk of serving a rural market without government assistance cannot realistically be expected to continue to do so if they must face a government-subsidized competitor. Moreover, devoting funds to already-served areas creates a greater risk that loans may not be repaid because borrowers will face pre-existing competition. All these results can be avoided if support is targeted to areas where a market-based solution has not emerged.

An important second priority for rural broadband support programs should be to enable underserved *populations* to acquire and make effective use of broadband service where it is already available. Many rural and low-income households do not subscribe to the broadband services that are available because they don't have the necessary equipment, training, or educational opportunities to take advantage of the benefits of Internet use. Indeed, approximately 35 million households in the United States have access to broadband, but do not currently use it.[20/] Demand-side stimulus investment programs that promote the use of broadband among these underserved populations also could serve an important purpose. Such programs could include attempts to stimulate demand by, for example, making computers or laptops available at a discount to qualifying households, discounting monthly service, or other tailored means designed to stimulate adoption by targeted groups.

Finally, there are underserved *areas* – areas in which broadband service is available, but

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[20/] *Moving the Needle on Broadband: Stimulus Strategies to Spur Adoption and Extend Access Across America*, National Cable and Telecommunications Assoc., at 2 (Mar. 17, 2009). Notably, of that number, only 30 percent have more than a high school education. *Id.*

not at speeds generally available throughout the rest of the country.[21/] In these areas, the government should proceed with caution. Only when all Americans have access to broadband should any funds remaining for new infrastructure deployment be extended to support projects in underserved areas. Even then, the need for subsidy in these underserved areas is not as great as in unserved areas or for underserved populations because the market is already working to bring broadband to the community. Moreover, subsidizing infrastructure in these areas runs the risk of subverting the commercial deployment already taking place. Subsidies to these underserved areas should therefore be carefully structured so as not to favor one technology over another, one provider over another, the public sector over the private sector, or otherwise upset marketplace dynamics.

B. All Rural Broadband Support Should Be Awarded On A Competitively-Neutral And Technology-Neutral Basis.

If broadband is to be deployed to the greatest extent possible throughout rural America, all support must be awarded on a competitively-neutral and technology-neutral basis. A successful strategy may require a combined effort by a variety of providers and means, and the government should not interfere with that solution by favoring any particular outcome or technology in its support programs.

Congress's intent, as recently set forth in the ARRA, clearly is to promote and enable broadband deployment from a variety of providers without regard to the particular technology they employ to deliver the service. Grants should be awarded to any "recipient[] that will best achieve the broad objectives of the program" and those agencies distributing support funds are to do so to any recipient they "judge[] will best meet the broadband access needs of the area to be

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[21/] Such areas would be defined in terms of below-standard speed and other qualitative measures relative to today's current generation service.

served, whether by a wireless provider, a wireline provider, or any provider offering to construct last-mile, middle-mile, or long haul facilities."[22/] Congress emphasized its intent that, "consistent with the public interest and purposes of this section, as many entities as possible be eligible to apply for a competitive grant, including wireless carriers, wireline carriers, backhaul providers, satellite carriers, public-private partnerships, and tower companies."[23/] It specifically refused to create a one-size-fits-all definition of broadband, instead leaving it to the implementing agencies to devise a definition that "take[s] into consideration the technical differences between wireless and wireline networks, and consider[s] the actual speeds that broadband networks are able to deliver to consumers under a variety of circumstances."[24/] Consistent with Congress's intent, all rural broadband programs should be devised and implemented in a manner that does not favor any particular technology, whether via its definitions for eligibility, application requirements, or otherwise.

C. Rural Broadband Support Programs Must Use A Reasonable And Consistent Definition Of Broadband.

The broadband support programs, especially those targeting rural areas, must use a reasonable definition of broadband that (a) does not include unreasonable speed requirements, and (b) is applied consistently across the programs, if the programs are to succeed in encouraging widespread broadband deployment. While greater speeds can be beneficial, establishing too high of a bar for eligibility could have the perverse effect of deterring any investment, depriving those areas of jobs in building out broadband and perpetuating the lack of broadband service rather than remedying it.

22/ H. CONF. REP. NO. 111-16, at 774 (2009).

23/ *Id.* at 775.

24/ *Id.* at 776.

In the ARRA, Congress reiterated that, while it hoped and intended that support for rural broadband efforts will "result in the greatest possible broadband speeds being delivered to consumers," it also rejected specific speed thresholds that an applicant must meet to be eligible for a grant.[25/] Congress was aware that a "specific speed threshold could have the unintended result of thwarting broadband deployment in certain areas," and instead required only that the NTIA "consider the speeds that would be delivered to consumers in awarding grants" and "seek to fund, to the extent practicable, projects that provide the highest possible, next-generation broadband speeds to consumers."[26/] Congress made clear, however, that it expected NTIA to coordinate its understanding of these terms with the FCC, so that the NTIA may benefit from the FCC's expertise in this matter.

To most effectively implement a broadband strategy, the agencies should define "broadband" in a manner that establishes two distinct levels of service. First, the agencies should establish the lowest level of service that qualifies as "broadband" in order to aid its identification of "unserved" areas. For these purposes, "broadband" should be defined as a connection to the Internet with a transmission speed of at least 768 kilobits per second ("kbps") in at least one direction. This is the minimum speed identified by the FCC as "basic broadband tier 1."[27/] Areas that lack the identified level of service should be considered "unserved." Within these areas, broadband programs should focus first on communities that lack even what the FCC has defined as "first generation data" services with transmission speeds of between 200

25/ H. CONF. REP. NO. 111-16, at 775-776 (2009).

26/ *Id.*

27/ *Development of Nationwide Broadband Data to Evaluate Reasonable and Timely Deployment of Advanced Services to All Americans, Improvement of Wireless Broadband Subscribership Data, and Development of Data on Interconnected Voice over Internet Protocol (VoIP) Subscribership,*, Report and Order and Further Notice of Proposed Rulemaking, 23 FCC Rcd 9691, ¶¶ 19-20 & n.66 (2008) ("*Broadband Data Report and Order*"); *see also* 47 C.F.R. § 1.7001(a).

and 768 kbps.[28/] This is also the definition of broadband in RUS's Community Connect program.[29/] For the purpose of determining whether an area is "unserved," the presence of wireless and wireline broadband providers should be assessed separately.

Second, the agencies should define a higher level of "broadband" service that both establishes the minimum speeds necessary for projects that are eligible for benefits under the agency programs and serves to identify geographic areas that can be defined as "underserved." For these purposes, a service should not be considered "broadband" unless it provides a maximum transmission speed of at least 3 megabits per second downstream and 768 kilobits upstream. This speed pairing is generally regarded as current generation broadband, is equivalent to third generation (3G) wireless broadband, and is consistent with the midpoint of broadband speeds identified by the FCC for broadband reporting purposes.

Defining broadband by reference to current generation service appropriately balances Congress's directive to promote the highest *practicable* transmission speeds. A definition of broadband with higher speeds runs the risk of misallocating funds that should be devoted to higher priority geographic areas and populations, and could deter any wireline or wireless investments in areas that do not currently support broadband, depriving those areas of jobs in building out broadband and perpetuating the lack of broadband service. Moreover, an area that has some broadband service (so it is not an "unserved" area) but that lacks at least one provider of broadband service with at least current generation speeds would be considered an "underserved" area. As with unserved areas, this test would be applied separately for wireless and wireline broadband service.

28/ *Broadband Data Report and Order* ¶ 20 n.66.

29/ *See* 7 C.F.R. § 1739.3.

IV. THE FCC SHOULD UPDATE ITS UNIVERSAL SERVICE AND POLE ATTACHMENT POLICIES TO BETTER PROMOTE RURAL BROADBAND

A. The Commission Should Reform The High-Cost Support Program Within Universal Service.

Improvements in technology, particularly the transition to IP-based equipment and services, have made it possible for cable operators and other facilities-based competitors to serve areas that previously might not have supported competitive entry. Likewise, incumbent telephone companies that historically relied on a single revenue source – phone service – to support network costs can today provide multiple services (including DSL and cable) over infrastructure previously used only for telephone service. With robust facilities-based competition for voice and non-voice services now a reality, it is unnecessary to maintain the historical levels of funding for the high-cost component of the universal service fund. Updating those funding levels will help relieve upward pressure on consumer rates that results from rising contribution requirements on voice providers.

It also is worth taking a fresh look at the mechanism for distributing high-cost support. The existing mechanism has failed to capture the benefits of improving technology and expanding competition described above. Instead, extensive support goes to areas also served by cable voice providers – funding that could and should be put to far better use. Granting subsidies to one competitor in such areas disrupts the competitive marketplace and wastes scarce funding. Where there is evidence that the market is working to make service available to locations previously thought to be uneconomic, the Commission should take steps to reduce the support provided to those areas. The amount of support provided to competitive areas can be reduced to more efficient levels through a variety of mechanisms, including reverse auctions. Before reverse auctions are used, however, a number of significant details must be resolved to ensure

that auctions further, rather than retard, the development of competition in high-cost areas.

Finally, as the FCC's Inspector General has reported, the high-cost fund also has a large and growing accountability problem, with the most recent audit showing a level of "erroneous payments" that was nearly nine times (23.3%) the threshold (2.5%) for classifying a program as "at risk" under the Improper Payments Information Act of 2002.[30/] Any reform plan must contain concrete steps to reduce this level of error and inefficiency.

B. The Commission Should Adopt A Pole Attachment Rate Formula That Promotes Broadband Deployment In Rural Areas And True Parity Among Broadband Providers.

Pole attachment fees are a significant cost associated with deploying broadband in rural areas. The Commission can promote rural broadband deployment by taking steps to ensure that those pole attachment fees are no higher than needed to cover the costs incurred by the pole owner. The best means of achieving the Commission's goals of promoting broadband and encouraging true regulatory parity would be to set a formula that enables all broadband providers to pay rates established under the existing cable rate formula.

The Commission for years has applied the cable rate formula contained in section 224(d) to determine rates for pole attachments by cable operators, and this approach has been repeatedly upheld as providing appropriate compensation to pole owners. Establishing that this rate is available not only to cable broadband providers but also to all broadband providers, as NCTA has proposed in the Commission's proceeding on this issue,[31/] would facilitate the most

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30/ FEDERAL COMMUNICATIONS COMMISSION, OFFICE OF INSPECTOR GENERAL, THE HIGH COST PROGRAM INITIAL STATISTICAL ANALYSIS OF DATA FROM THE 2007/2008 COMPLIANCES ATTESTATION EXAMINATIONS, at 2, 21 n.50 (2008).

31/ *See Implementation of Section 224 of the Act; Amendment of the Commission's Rules Governing Pole Attachments, WC Docket No. 07-245;* RM-11303*; RM-11293*, Reply Comments of the National Cable & Telecommunications Association at 18-23 (filed Apr. 22, 2008) ("NCTA Reply Comments") (proposing, with respect to CLECs, that the Commission forbear from the statutory telecommunications

investment in broadband networks, especially in rural areas where there are more poles per customer.[32/] In contrast, the higher pole attachment rates that some parties have proposed would increase the costs of broadband service – again, particularly in rural areas because of the higher number of poles per customer – and thereby reduce demand for broadband at the very moment when the Federal government seeks to increase sustainable broadband adoption. The harm to rural consumers would be particularly pronounced, since more poles per customer are required to reach users in these sparsely populated areas.

Additionally, the Commission should encourage Congress to consider regulation of the rates charged for attachments to cooperatively and municipally owned poles. Currently, broadband providers are subject to excessive, unjustified rates and other onerous terms and conditions in areas where poles are not subject to regulated rates. This is frequently the case in rural areas. Those excessive rates create a barrier to further deployment in rural areas because they raise the cost of providing service. Removing this barrier would create a pathway to additional broadband deployment in rural areas.

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rate formula contained in Section 224(e) and apply the cable rate formula instead, and that ILECs be brought under the cable attachment regime by permitting them to "opt in" to existing agreements between cable operators and electric companies).

32/ *See id.*, NCTA November 14, 2009 Ex Parte at 6; *see also* NCTA Reply Comments, Exhibit A, Declaration of Billy Jack Gregg at 13 ("The new higher pole attachment rates for cable providers in West Virginia will substantially increase the annual cost of doing business for these providers and will increase the costs of extending service to rural and high-cost areas that currently do not have broadband service.").

As NCTA has explained in prior filings before the Commission, any attempt to achieve regulatory parity with respect to pole attachments must also consider the significant differences in the terms and conditions contained in license agreements pursuant to which cable operators and competitive local exchange carriers attach and the terms and conditions contained in joint use or joint ownership agreements between incumbent local exchange carriers and electric companies.

CONCLUSION

The Commission has an important role to play, through its development of a rural broadband strategy, a national broadband strategy, and its expert guidance to NTIA and RUS as they implement the broadband programs entrusted to them by Congress. NCTA's members – the leading providers of broadband service in the United States – look forward to working with the Commission at all stages of these processes so that all Americans can soon enjoy the benefits of broadband.

Respectfully submitted,

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March 25, 2009

ATTACHMENT A

MOVING THE NEEDLE ON BROADBAND:

STIMULUS STRATEGIES TO SPUR ADOPTION AND EXTEND ACCESS ACROSS AMERICA

MARCH 17, 2009

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MOVING THE NEEDLE ON BROADBAND:

STIMULUS STRATEGIES TO SPUR ADOPTION AND EXTEND ACCESS ACROSS AMERICA

EXECUTIVE SUMMARY

It is widely understood that broadband is a crucial driver of economic recovery and global competitiveness. The broadband funding programs established by Congress in the American Recovery and Reinvestment Act (ARRA) can help foster these goals. In particular, these programs can help bring broadband to the small percentage of the nation's homes with no physical access to broadband and overcome other barriers to adoption – such as affordability, the lack of a computer or other equipment needed to connect to the Internet, and low levels of basic "digital literacy."

In order to best address these issues and to ensure that broadband fulfills its full promise as an engine of job creation, a facilitator of educational and healthcare opportunities, and a means of shrinking the distances between isolated communities, the ARRA's broadband grant and loan programs should be implemented with the following basic principles:

- Funds should be used to increase broadband adoption and use;
- Awards should be competitively and technologically neutral so as not to create disincentives to private investment that necessarily will continue to take the lead in broadband deployment
- Value-producing projects that can be implemented quickly should receive the highest priority; and,
- Implementation should be transparent and coordinated with other agencies providing similar aid.

In deploying the stimulus funds, care must also be taken so that the program will do no harm to the fabric of the broadband industry, which on its own has already invested hundreds of billions of dollars on broadband networks and services – far in excess of the substantial broadband subsidy programs in the stimulus package.

With these principles in mind, the foremost priorities in awarding competitive grants, in descending order, should be:

1. Extending broadband facilities to *unserved areas*.

2. Supporting programs that enable *underserved populations* to acquire and to make effective use of broadband service where it is already available.

3. If funds remain, extending broadband facilities to *underserved areas* defined in terms of below-standard speed and other qualitative measures relative to today's current-generation broadband services.

Unserved Areas: Approximately 9-10 million households, typically in rural communities, lack access to broadband services. Devoting grants to extending broadband coverage to these unserved areas should be a high priority.

Underserved Populations: At the same time, an additional 35 million households have access to broadband, but do not currently use this service. Many of these households are relatively low income, and only 30 percent have more than a high school education. Demand-side stimulus investment programs that promote the use of broadband among these underserved populations therefore also serve an important purpose.

Underserved Areas: Finally, there are households in underserved areas – areas in which broadband service is available, but not at speeds generally available throughout the rest of the country. In these areas, the government should proceed with caution. The need for subsidy in these underserved areas is not as great as in unserved areas or for underserved *populations*, and subsidizing infrastructure in these areas runs the risk of subverting the commercial deployment already taking place. Subsidies to these underserved areas should therefore be carefully structured so as not to favor one technology over another, one provider over another, the public sector over the private sector, or otherwise upset marketplace dynamics.

Under these conditions, the broadband grant programs promise great short and long-term benefits to the American economy. The $7 billion program has the potential to do a tremendous amount of good, and the cable industry supports the federal government's efforts to use these funds to expand broadband access and spur adoption.

INTRODUCTION

Broadband technology, as Congress, the FCC and others have recognized, is a key driver of economic growth. Grants to promote the use of broadband thus effectively stimulate both short-term and longer-term economic growth.

The cable industry is at the forefront of a vibrant marketplace that has been responsible for the explosive growth in both broadband deployment and broadband use in the country. In sharp contrast to the situation only a decade ago, today more than 92 percent of American households have access to wired broadband services,[1] and the cable industry alone has spent tens of billions of dollars upgrading and expanding its networks to provide this broadband access.[2] Even in challenging times for the nation's economy, the cable industry continues to make very significant capital investments in order to increase broadband deployment and improve current generation broadband service -- improving upstream and downstream speeds, as well as improving reliability and ease of use.

As the largest provider of retail broadband service in the U.S., the cable industry has a significant interest in the success of grant programs designed to promote broadband use. All broadband customers and providers benefit indirectly from an effective grant program, since the more households and businesses that connect to broadband, the more valuable it is to all broadband consumers.

Cable's interest -- and sound public policy -- are implicated by the nature of the grant programs in a more profound way as well. The $7 billion program has the potential to do a

[1] SNL Kagan data (2008).
[2] NCTA figures based upon SNL Kagan estimates, *available at* http://www.ncta.com/Stats/InfrastructureExpense.aspx. Between 1996 and 2008 cable operators have invested more than $145 billion in capital to enhance their hybrid fiber-coaxial networks and other infrastructure, including approximately $14.6 billion in 2008. A similar level of capital expenditures is estimated for 2009.

tremendous amount of good, and we support the federal government's efforts to use these funds to expand broadband access and spur adoption. It is also true, however, that these funds must be viewed in the context of a vastly larger capital requirement if we are to achieve full broadband construction and maintenance for the country. The cable industry alone spent twice that $7 billion amount in just the past year to upgrade its facilities. Most of the investment necessary to provide and then to maintain broadband service has and will come from the private sector. As a result, a critical consideration in devising a sound program is that the program not harm the investment fabric of the broadband industry. A successful program must supplement, and not distort, the growing private, competitive market for broadband services. Stated simply, the grant program must not only weigh the needs for stimulus over the next 24 months, it must also seriously consider the effect that grants will have on the future of broadband services in this nation.

We therefore propose that the Commerce and Agriculture Department programs be designed to implement the following four principles, each of which is equally important:

First, the grants should be used to increase broadband adoption and use;

Second, the grants should be competitively and technologically neutral so as not to affect the private marketplace that must continue to take the lead in broadband deployment;

Third, the grants should further the statutory goal of economic stimulus, that is, they should fund value-producing projects that can be implemented quickly and create new jobs; and

Fourth, it is essential, as well as statutorily mandated, that the grant-making programs be transparent, accountable, and coordinated with other agencies providing similar aid.

With these principles in mind, the priorities in awarding competitive grants, in descending order, should be:

1. Extending broadband facilities to *unserved areas*.

2. Supporting programs that enable *underserved populations* to acquire and to make effective use of broadband service where it is already available.

3. If funds remain, extending broadband facilities to *underserved areas* defined in terms of below-standard speed and other qualitative measures relative to today's current generation broadband services.

Given the limited amounts of funds available relative to need, these priorities should be strictly observed.

PRINCIPAL PRIORITIES IN AWARDING COMPETITIVE GRANTS

A. Extending broadband facilities to unserved areas.

Extending the physical availability of broadband where it currently does not exist should be the government's highest priority in terms of distributing broadband grants for infrastructure construction.[3] While the number of consumers with access to broadband has grown steadily over the past five years,[4] some geographic areas still lack the necessary infrastructure to offer broadband services. In particular, without government assistance, "[t]he economic costs and technological limitations blocking the expansion of broadband leave many rural communities underserved" and often unserved.[5] Thus, to meet the stimulus plan's goal of extending broadband to unserved areas, agencies should distribute grants so that new infrastructure is constructed in areas where none exists.

Although it is difficult to develop a precise and accurate count, approximately 9-10 million households lack access to broadband services.[6] Of these 9-10 million households, the

[3] In defining geographic areas that represent "unserved areas," agencies should rely on the FCC's definition of broadband which would denote areas where there is not at least one provider providing Internet access service of at least 200 kbps in one direction.
[4] John B. Horrigan, Home Broadband Adoption 2008 at 1 (Pew) (July 2008) ("Horrigan").
[5] Jon M. Peha, Bringing Broadband to Unserved Communities at 11, The Hamilton Project (The Brookings Institution) (July 2008) ("Peha").
[6] *Id.*

bulk is in rural communities.[7] All told, "perhaps a third of rural households" lack broadband access.[8] A study recently published under the auspices of the Columbia University Institute for Tele-Information, using data derived from the FCC and the Census Bureau, reflects these realities.

States Identified for "Unserved and Underserved" Targeting[9]

State	Percent of Residential unserved <93%	Number of Lines	Households	Household Penetration	Population	Population Penetration
Alabama	92%	808,291	2,137,018	38 %	4,627,851	17 %
Arkansas	75%	532,171	1,287,429	41 %	2,.834,797	19 %
Georgia	92%	2,296,983	3,961,474	58 %	9,544,750	24 %
Indiana	92%	1,206,274	2,778,394	43 %	6,345,289	19 %
Iowa	90%	581,263	1,329,596	44 %	2,988,046	19 %
Kansas	91%	680,270	1,219,439	56 %	2,775,997	25 %
Kentucky	91%	843,641	1,906,096	44 %	4,241,474	20 %
Maine	93%	288,491	696,611	41 %	1,317,207	22 %
Mississippi	91%	384,772	1,254,908	31 %	2,918,785	13 %
Montana	88%	185,251	435,533	43 %	957,861	19 %
Nebraska	93%	406,674	780,804	52 %	1,774,571	23 %
New Mexico	82%	343,568	862,067	40 %	1,969,915	17 %
North Dakota	88%	137,207	310,548	44 %	639,715	21 %
Oklahoma	91%	815,765	1,623,010	50 %	3,617,316	23 %
Pennsylvania	93%	2,852,177	5,477,864	52 %	12,432,792	23 %
South Carolina	92%	844,013	2,021,947	42 %	4,407,709	19 %
South Dakota	80%	160,821	357,240	45 %	796,214	20 %
West Virginia	84%	297,852	882,685	34 %	1,812,035	16 %
TOTAL		13,665,484	29,322,663	47 %	66,002,324	21 %

Source: FCC table 14 of HSPD1207; US Census Bureau

As this chart reflects in its first two columns, there are 18 states in which the percentage of homes with access to broadband service from at least one provider is below 94 percent.[10] More pertinent still, as reflected in the fifth column titled "Household Penetration," on average

[7] *Id.* at 11-12.
[8] *Id.* at 5, 9 fig.3.
[9] Raul Katz and Stephan Suter, Estimating the Economic Impact of the Broadband Stimulus Plan (Feb. 2009), at 18.
[10] In addition to the states noted, additional states such as Vermont, Alaska and Nevada also contain many households either without access to even one broadband provider or without robust penetration rates, states which are not represented in the table because of limitations in the underlying FCC data.

well under 50 percent of the households in these states actually subscribe to a broadband service, less than the national average of 61 percent.[11]

The reason for this disparity between availability and adoption in these states is not that rural communities are less interested in the Internet. To the contrary, the fraction of rural households subscribing to *any* Internet service is just below the national average. The difference is that rural users rely far more on dial-up -- often all that is readily available (although satellite broadband is also fairly widely marketed) -- and far less on broadband to access the Internet.[12]

The stimulus plan calls for grants to encourage investments that would not otherwise be made in a particular geographic area, and for grants where they will be "efficient and expeditious."[13] Among unserved geographic areas, subsidies therefore should be targeted first to areas in which service would not otherwise be provided and that could support the ongoing costs of providing broadband service if government funded the costs of the underlying infrastructure. Underwriting the capital cost of facilities in areas without sufficient demand creates a significant risk that government funds may be diverted to the construction of facilities that ultimately must be abandoned because providers are unable to recoup the operating costs of providing service.

Unfortunately, it is challenging to identify with precision which areas are "unserved." The stimulus bill's requirement for extensive mapping of broadband availability will ultimately provide a better estimate of access, but unfortunately most of that mapping will be incomplete while grants are still being processed.[14] In the meantime, however, grant allocations should take into account the actual number of households that a given broadband plan will affect, factoring in

[11] NCTA estimate based on SNL Kagan Data (2008).
[12] Peha, at 9-10.
[13] The American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, § 6001(e)(3), 123 Stat. 115, 512-13 (2009).
[14] The cable industry strongly supports the cooperative mapping exercise set out in the law. These mapping projects should be given a priority: the more quickly accurate mapping information is available, the more productively the remainder of the grant funds can be distributed.

the limitations of the data.[15] The obligation should fall to all applicants for grants to demonstrate the number of households that currently lack any access to broadband services, and the specific number of households that would have access to broadband for the first time as the result of awarding the grant.

Moreover, and as we describe in more detail below,[16] for grants to be put to use expeditiously, they should not be subject to conditions that call for technology that is beyond current generation of broadband technology. In particular, practically deliverable broadband capacity has consistently increased over the years, and will continue to increase going forward. It would be inconsistent with the goal of rapid stimulus, however, to condition grants on a level of performance that is not generally available today, which, in the case of broadband speed, is approximately a maximum of 3-6 Mbps downstream and 500-1000 kbps upstream depending on the technology involved. As the House-Senate conferees on the ARRA recognized, establishing too high a bar for eligibility could have the perverse effect of deterring investment, depriving those areas of jobs in building out broadband and perpetuating the lack of broadband service rather than remedying it.[17]

B. Supporting programs that enable underserved <u>populations</u> to acquire and to make effective use of broadband service where it is available.

Merely providing broadband access does not necessarily mean that customers will subscribe to it. The larger problem is that many consumers fail to subscribe to broadband service even when it is available. For too many of the 92 percent of households in the United States[18] that have access to broadband services, and for many of the remaining households that could receive access through effective grant programs, there is a demand-side problem. Specifically,

[15] In less populous states, assessments of relative populations served may also be appropriate.
[16] *See infra* pp. 12-13.
[17] H. Conf. Rep. 111-16 (2009) at 775.

only about 61 percent of U.S. households subscribe to broadband service,[19] and 70 percent of households headed by someone under 65 years of age receive broadband service.[20] An effective grant program therefore should address the reasons why particular populations choose not to subscribe even when broadband is available.

Two key obstacles -- lack of interest and lack of resources -- greatly affect whether Americans subscribe to broadband. It should be no surprise that Congress has therefore directed that a significant amount of resources be directed to promoting broadband awareness and adoption by these underserved populations. Indeed, this is the *principal* area in which Congress has expressly mandated that funds be spent, underscoring its priority. The plain legislative intent is that the mandated amount is the bare minimum that should be directed to demand-side stimulus, with no indication that Congress intended to impose any upper limit on such expenditures.

These obstacles are acutely present in low-income and low-education households.[21] One consequence is that the rural poor suffer a double whammy -- not only are many rural areas unserved, but low-income households underutilize broadband even when it is available. As the following chart illustrates, a sensible grant program would target these populations and the barriers that prevent them from receiving the benefits of broadband:

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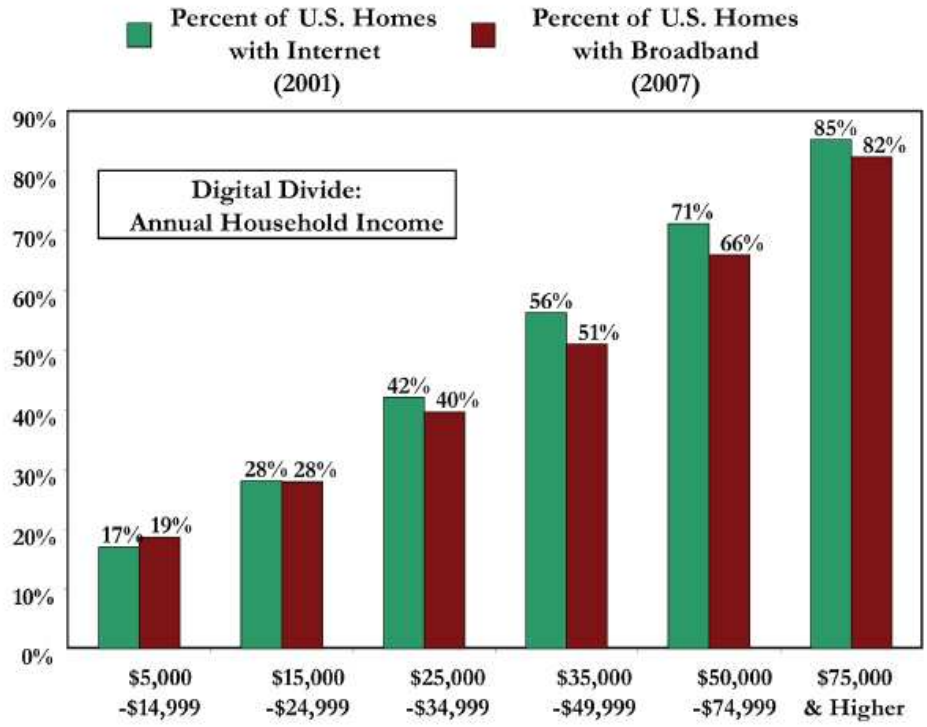
[18] *See supra* n. 1.
[19] *See supra* n. 11.
[20] NCTA estimate based on: U.S. Census data, American Housing Survey for the United States (2007); National Information and Telecommunications Administration, Households using the Internet In and Outside the Home, By Selected Characteristics: Total, Urban, Rural, Principal City (2007) (http://www.ntia.doc.gov/reports/2008/Table_HouseholdInternet2007.pdf)..
[21] Peha, at 5 (low broadband penetration in households with total income under $30,000).

The Economic Broadband Divide (2001 & 2007)[22]



Source: U.S. Census Bureau, 2007.

To address demand, it is of course first necessary to understand the reasons for the lack of demand. Researchers studying broadband access have concluded that "lack of interest" in broadband is the main reason that people do not purchase the service.[23] Indeed, about one-quarter of adult Americans do not use the Internet at all; these individuals are disproportionately lower-income and older than average Internet users.[24]

This lack of use appears to stem from lack of familiarity. Most non-broadband households view broadband as being either irrelevant or difficult to use.[25] Nearly half of the population that does not subscribe to broadband says it does not need such a connection.[26] A significant portion of those not adopting broadband holds generally less positive attitudes toward

[22] Free Press, Down Payment On Our Digital Future, Stimulus Policies for the 21st Century Economy at 24 (Dec. 2008).
[23] John B. Horrigan, Obama's Online Opportunities II: If You Build It, Will They Log On? at 2 (Pew) (2009)
[24] Horrigan, at iii, 12.
[25] *Id.*

technology than do their connected counterparts. Almost half of the dial-up users stated that modern electronic devices interfere with personal productivity, whereas almost 70 percent of broadband users say that these devices aid productivity.[27]

Lack of resources is also an issue, though it is not the only issue. Many dial-up users say they cannot afford broadband services; 35 percent say the price of broadband would have to fall for them to subscribe.[28] But *perceived* price seems to play almost as important a role as actual price differential; the reality is that broadband is 4 percent cheaper today and the price of dial-up is roughly 9 percent higher than those services were in 2005.[29] These facts, in connection with survey evidence, have led researchers to conclude that the decision to not obtain broadband service likely is due to perceived or relative value, not the inability to pay. And to be clear, it is not due to the unavailability of broadband access, because more than 92 percent of Americans currently have access to broadband services.

To address these issues, grant funds should be targeted to programs that educate targeted consumers on the benefits of broadband service. In addition, grants should be used to provide targeted subsidies to make broadband services more affordable, and to take other steps on a pilot project basis similar to those adopted in "Lifeline," "Link-Up" and related programs that have historically helped to subsidize voice services, in order to support the demand for broadband service. By way of example, programs that support an increase in computer ownership and training are very promising and should be supported extensively. The law calls for such grants,[30] and they have a double benefit: they ensure the prompt expenditure of grant dollars in ways that

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[26] Consumer Insights to America's Broadband Challenge at 2, Connected Nation (Oct. 13, 2008).
[27] Horrigan, at 13-14.
[28] *Id.* at ii, 11.
[29] *Id.* at 7, 8.
[30] *See* The American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, § 6001(b)(3), 123 Stat. 115, 512-13 (2009).

promote jobs. For both of these reasons, such grants will be one of the most effective and appropriate ways to stimulate broadband adoption and use.

C. Extending broadband facilities to underserved areas defined in terms of below-standard speed and other qualitative measures relative to current generation service.

Finally, it is no doubt the case that some broadband customers are *underserved* − that is, they live in areas where there is at least one provider offering broadband, but not at robust speeds. In these areas, providers may offer broadband service at transmission speeds that exceed the FCC's definition, but fall short of the speeds typically experienced by consumers with current generation broadband service (generally, a maximum of 3-6 Mbps downstream and 500-1000 kbps upstream). Promoting more robust broadband services in these underserved *areas* is the third element of a sound broadband grant program. The problems associated with underserved areas, however, are by their nature not as substantial as those faced by potential customers who lack broadband access altogether, or by populations who cannot afford or do not understand the benefits of broadband. Promoting additional services where broadband is already available may increase broadband penetration marginally, but the impact on penetration is likely to be significantly less than efforts to extend broadband access where none is available,[31] or to promote broadband use among populations with low broadband adoption rates.

At the same time, grants to address any problems associated with underserved areas -- where, by definition, providers have invested risk capital to deploy broadband -- present the greatest danger of undermining the existing broadband investment environment. The cable, telephone, wireless, and satellite industries have and continue to pursue innovation that has brought access to the present point. Any subsidies to areas in which broadband service is

[31] Of course, projects to construct middle mile facilities may fall in this category where such deployment can be demonstrated to enable the expansion of local broadband networks into unserved areas.

presently available should be designed to avoid disincentives that would threaten diminution of the entire broadband ecosystem.

Particularly, subsidies should not have the unintended consequence of favoring one technology over another, one provider over another, public sector over private sector, or otherwise upsetting marketplace dynamics. To avoid this possibility, the grant system should apply the principles of competitive neutrality to the broadband sphere. A competitively neutral approach would ensure that entities vying for grants develop the most efficient means of supplying broadband to the widest swath of the population, and at the same time avoid favoring a particular technology. Such an approach would recognize that favoring a given technology runs the risk of distorting the competitive marketplace and limiting innovation.

The risks of marketplace distortion are not hypothetical. Currently, the marketplace offers consumers broadband through a mix of technologies -- DSL- and fiber-based technologies offered by phone companies, hybrid fiber-coax services offered by cable providers, and wireless services offered by both terrestrial wireless carriers and satellite providers. Each technology has its strengths and weaknesses, and companies continue to upgrade their services to compete with each other for customers.

These varying wired and wireless broadband technologies are evolving rapidly, and it is too early to tell which technology, or sets of technologies, will be best suited for which kinds of customers in which geographic or demographic areas. In that context, it is especially important that the grant program adhere to strict competitive and technology neutrality; in neither its purpose nor in its effect, should it favor one set of technologies or one set of providers over another.

Additionally, grants that target certain connection speeds raise a core definitional question: how fast does service have to be to qualify as broadband or to qualify for a subsidy? In fact, a broad range of speeds properly qualify as high-speed or broadband. Prior to 2008, the FCC used the term "high-speed" to describe services that provided data to subscribers in excess of 200 kbps in at least one direction. Other entities defined high-speed Internet using similar data transfer rates in similar terms, with the Organization for Economic Co-operation and Development defining broadband as having download data transfer rates equal to or faster than 256 kbps per second. Today, of course, broadband facilities are capable of much faster speeds.

Certain broadband options, though very fast, will be unaffordable to the vast majority of the populations who currently lack broadband access. Likewise, the investment necessary to create a very fast broadband network may not be economic in certain areas -- the infrastructure costs may be far too high to justify the minor gains in efficiency.[32]

Given the ARRA's deadlines for issuing grants and completing projects, any definition of inadequate speed as a hallmark of an "underserved" area cannot, as a practical matter, ignore the current speed levels. It thus would make no sense to attach speed prerequisites beyond, for example, a maximum information transfer rate of at least 3 Mbps downstream and 768 kbps upstream. Describing higher speeds as essential runs the risk of misallocating funds that should be devoted to higher priority geographic areas and populations.

[32] Economics of Broadband Access for Underserved Consumers and Businesses, Public Technology Institute (May 2007).

CONCLUSION

In light of these issues and to achieve the intent of the stimulus plan, it is critical that agencies focus first on extending broadband facilities to unserved areas and to support programs designed to enable underserved populations to take advantage of broadband services. To the extent funds remain, extending broadband to underserved areas would be appropriate, so long as agencies do not upset the competitive balance.